

climate change, as well results from independent scientific review of the results from over 20 current-generation climate models. The significance of the Working Group I report, as noted by the peer reviewers with climatological expertise, is that the spatial resolution and physics of climate models have improved such that uncertainties associated with various model components, including prescribed ocean conditions, mobile sea ice, clouds/radiation, and land/atmosphere exchanges, have been reduced significantly from previous-generation models (i.e., those used in the IPCC *Third Assessment Report*).

One peer reviewer recommended that appropriate effort should be made to integrate the existing sources of Alaska native and other indigenous traditional and contemporary ecological knowledge (TEK) into our final rule. In addition, the peer reviewer recommended that we actively conduct community outreach to obtain this information from Alaska villages located within the range of the polar bear.

One peer reviewer opposed the listing and asserted that existing regulatory mechanisms are adequate because the Inuit people will account for climate change in setting harvest quotas for polar bears.

Peer Review Comments

We reviewed all comments received from peer reviewers for substantive issues and new information regarding the proposed designation of the polar bear as a threatened species. Comments and responses have been consolidated into key issues in this section.

Comment PR1: The importance of sea ice to polar bears is not well articulated in the proposed rule, and the consequences of polar bears using land as an alternative “platform” are understated.

Our response: We recognize the vital importance of sea ice as habitat for polar bears. New information and analyses of specific sea ice characteristics important to polar bears has been prepared by USGS (Durner et al. 2007), and incorporated into this final rule. Projections of changes to sea ice and subsequent effects on resource values to polar bears during the foreseeable future have also been included in the analyses in this final rule (see “Polar Bear—Sea Ice Habitat Relationships” section). The consequences of prolonged use of terrestrial habitats by polar bears are also discussed in detail in the “Effects of Sea Ice Habitat Change on Polar Bears” section of this final rule. We believe that we have objectively

assessed these consequences, and have not under- or overstated them.

Comment PR2: The importance of snow cover to successful reproduction by polar bears and their primary prey, ringed seals, should receive greater emphasis.

Our response: We recognize the importance of snow cover for denning polar bears and pupping ringed seals. Additional new information has been included in the sections on climate and the section “Effects of Sea Ice Habitat Changes on Polar Bear Prey,” “Maternal Denning Habitat,” and “Access to and Alteration of Denning Areas” sections.

Comment PR3: Harvest programs in Canada provide conservation benefits for polar bears and are therefore important to maintain. In addition, economic benefits from subsistence hunting and sport hunting occur.

Our response: We recognize the important contribution to conservation that scientifically based sustainable use programs can have. We further recognize the past significant benefits to polar bear management in Canada that have accrued as a result of the 1994 amendments to the MMPA that allow U.S. citizens who legally sport-harvest a polar bear from an MMPA-approved population in Canada to bring their trophies back into the United States. In addition, income from fees collected for trophies imported into the United States are directed by statute to support polar bear research and conservation programs that have resulted in conservation benefits to polar bears in the Chukchi Sea region.

We recognize that hunting provides direct economic benefits to local native communities that derive income from supporting and guiding hunters, and also to people who conduct sport hunting programs for U.S. citizens. However these benefits cannot be and have not been factored into our listing decision for the polar bear.

We note that, under the MMPA, the polar bear will be considered a “depleted” species on the effective date of this listing. As a depleted species, imports could only be authorized under the MMPA if the import enhanced the survival of the species or was for scientific research. Therefore, authorization for the import of sport-hunted trophies will no longer be available under section 104(c)(5) of the MMPA. Neither the Act nor the MMPA restricts take beyond the United States and the high seas, so otherwise legal take in Canada is not affected by the threatened listing.

Comment PR4: The ability of polar bears to adapt to a changing environment needs to be addressed

directly, with a focus on the importance of rates of environmental change relative to polar bear generation time.

Our response: We have addressed this issue by adding a section to the final rule entitled “Adaptation” under “Summary of Factors Affecting the Polar Bear.” Information regarding how polar bears survived previous warming events is scant, but some evidence indicates that polar bears survived by altering their geographic range, rather than evolving through natural selection. The pace at which ice conditions are changing and the long generation time of polar bears appear to preclude adaptation of new physiological mechanisms and physical characteristics through natural selection. In addition, the known current physiological, physical, and behavioral characteristics of polar bears suggest that behavioral adaptation will be insufficient to prevent a pronounced reduction in polar bear distribution, and therefore abundance, as a result of declining sea ice. Current evidence suggests there is little likelihood that extended periods of torpor, consumption of terrestrial foods, or capture of seals in open water will be sufficient mechanisms to counter the loss of sea ice as a platform for hunting seals. Projections of population trends based upon habitat availability, as discussed in the USGS reports by Durner et al. (2007) and Amstrup et al. (2007) serve to further clarify the changes currently occurring, or expected to occur, as sea ice declines.

Comment PR5: Harvest levels for some polar bear populations in Nunavut (Canada) are not sustainable and should be discussed; however, these concerns do not materially alter the primary finding of the proposed rule.

Our response: Although we have some concerns about the current harvest levels for some polar populations in Nunavut, we agree that these concerns do not materially alter the primary finding of the proposed rule. As discussed in Factors B and D, impacts from sport hunting or harvest are not threats to the species throughout its range. We recognize that, as discussed in detail in this final rule, the management of polar bears in Canada and other countries is evolving. We believe that our evaluation of the management of the polar bear populations in Canada, which includes participation in the annual Canadian Polar Bear Technical Committee (PBTC) meeting, provides us with the best available information upon which to base future management decisions.

Comment PR6: The most important aspect relative to climate change is that